

3M General Offices

00-12
56853M Center
St. Paul, Minnesota 55144-1000
612/733 1110

Industrial Hygiene

Duns No.: 00-617-3082

AUG 18 1989

MATERIAL SAFETY
DATA SHEET**3M**

DIVISION: INDUSTRIAL CHEMICAL PRODUCTS DIVISION
TRADE NAME:
 FC-127 FLUORAD Brand Fluorochemical Surfactant
3M I.D. NUMBER: 98-0211-1128-5 98-0211-1129-3

OB 30 lte

ISSUED: APRIL 12, 1989
SUPERSEDES: FEBRUARY 21, 1989
DOCUMENT: 10-3805-8

1. INGREDIENT	C.A.S. NO.	PERCENT	----- EXPOSURE VALUE UNIT	LIMITS ----- TYPE AUTH
Potassium Fluoroalkyl Carboxylate	2991-51-7	40.0 -100.0	0.1 mg/m3	TWA 3M
Water	7732-18-5	32.0	NONE NONE	NONE NONE
Isopropyl Alcohol (IPA)	67-63-0	14.0	400 ppm	TWA ACGIH
Potassium Fluoroalkyl Carboxylate	67584-62-7	< 5.0	0.1 mg/m3	TWA 3M
Potassium Fluoroalkyl Carboxylate	67584-53-6	< 5.0	0.1 mg/m3	TWA 3M
Potassium Fluoroalkyl Carboxylate	67584-52-5	< 5.0	0.1 mg/m3	TWA 3M
Potassium Fluoroalkyl Carboxylate	67584-51-4	< 5.0	0.1 mg/m3	TWA 3M
Ethanol	64-17-5	4.0	1000 ppm	TWA ACGIH

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- 3M: 3M Medical Department Guideline
- NONE: None Established

2. PHYSICAL DATA

BOILING POINT:..... ca. 87.00 C
 (Initial)
VAPOR PRESSURE:..... ca. 35.0000 mmHg
 Calc. @ R.T.
VAPOR DENSITY: ca. 1.00 Air = 1
 Calc. @ R.T.
EVAPORATION RATE:..... < 1.00 Butyl Acetate = 1
SOLUBILITY IN WATER: complete
SP. GRAVITY:..... ca. 1.200 Water = 1
PERCENT VOLATILE: 50.00 %
VOLATILE ORGANICS: N/D
pH: ca. 8.00-11.00
VISCOSITY: N/D
APPEARANCE AND ODOR: Yellow to amber liquid with IPA odor.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... 26.00 C
FLAMMABLE LIMITS - LEL: N/D
FLAMMABLE LIMITS - UEL: N/D
AUTOIGNITION TEMPERATURE: ... N/D
EXTINGUISHING MEDIA:
 Water, Foam, CO2, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES:
 None Known
UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Toxic by-products, including HF, may be formed.

Abbreviations: N/D - Not Determined N/A - Not Applicable

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4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS TO AVOID:

Not Applicable

HAZARDOUS POLYMERIZATION: Will Not Occur

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition may produce toxic products including HF.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Extinguish all ignition sources. Ventilate. Observe precautions from other sections. Cover with absorbent material. Collect spilled material. Place in a U.S. DOT approved container and seal.

RECOMMENDED DISPOSAL:

Flush spent solutions and small product quantities, <5 gal., to a wastewater treatment system. Incinerate bulk product in a permitted hazardous waste facility. Combustion products will include HF. Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste No.: D001 (Ignitable)

ENVIRONMENTAL DATA:

COD=0.41 g/g; BOD20= 0.25 g/g; 96-Hr. LC50, Fathead minnow(Pimephales promelas)= 860 mg/l; Acute inhibitory effect on activated sludge respiration rate = None at 1000 mg/l.

SARA HAZARD CLASS:

FIRE HAZARD: Yes **PRESSURE:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush with plenty of water. Call a physician.

SKIN CONTACT:

Wash affected area with soap and water.

INHALATION:

Remove to fresh air.

IF SWALLOWED:

Give two glasses of water. IMMEDIATELY call a physician or Poison Control Center.

OTHER FIRST AID:

NONE

7. PRECAUTIONARY INFORMATION

Keep away from heat, sparks and open flame. Use only in well ventilated areas with sufficient air movement to maintain airborne levels at recognized health and safety levels. Avoid breathing vapors

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7. PRECAUTIONARY INFORMATION (continued)

or mists. Do not get on skin. Avoid eye contact. ****FC-127 will freeze. If frozen warm to room temperature and stir before using.****

SPECIAL PROTECTION:

EYE PROTECTION: Safety Glasses

SKIN PROTECTION: Rubber Gloves

VENTILATION: Local exhaust ventilation is recommended.

RESPIRATORY PROTECTION: Above component exposure limits, use organic vapor cartridge respirator.

ADDITIONAL EXPOSURE LIMITS

INGREDIENTS	---- EXPOSURE LIMITS ----		TYPE	AUTH
	VALUE	UNIT		
Isopropyl Alcohol (IPA)	980	mg/m3	TWA	ACGIH
Isopropyl Alcohol (IPA)	500	ppm	STEL	ACGIH
Isopropyl Alcohol (IPA)	1225	mg/m3	STEL	ACGIH
Isopropyl Alcohol (IPA)	400	ppm	TWA	OSHA
Isopropyl Alcohol (IPA)	980	mg/m3	TWA	OSHA
Isopropyl Alcohol (IPA)	500	ppm	STEL	OSHA
Isopropyl Alcohol (IPA)	1225	mg/m3	STEL	OSHA
Ethanol	1900	mg/m3	TWA	ACGIH
Ethanol	1000	ppm	TWA	OSHA
Ethanol	1900	mg/m3	TWA	OSHA

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration

8. HEALTH HAZARD DATA

EYE CONTACT: Animal studies indicate FC-127 is minimally irritating to the eyes upon direct contact. Persons getting FC-127 in their eyes would be expected to experience slight transient irritation.

SKIN CONTACT: FC-127 was found to be non-irritating to the skin when tested in albino rabbits. FC-127 can be absorbed through the skin. Care should be taken to avoid skin contact in order to prevent possible skin absorption of the fluorochemical.

INHALATION: Isopropanol and/or ethanol may cause irritation of the respiratory system and nervous system impairment. Isopropanol potentiates the effects of chlorinated hydrocarbons, n-nitroso-dimethylamine and n-hexane. Symptoms of overexposure to isopropanol and/or ethanol may include dizziness, nausea, headache, vomiting, incoordination, confusion, drowsiness, loss of coordination, fatigue and stupor. In extreme overexposure death may occur.

INGESTION: The acute oral LD50 (rat) is between 500 and 2500 mg/kg. FC-127 is considered slightly toxic orally. Aspiration of liquid into the lungs can cause chemical pneumonia which can be fatal.

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The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.